



Fleet Numerical Meteorology and Oceanography Center

FNMOOC Climate Services

This briefing is UNCLASSIFIED

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Navy Climatology History

- 1959: U.S. Navy climatology support was established in Asheville, NC.
- 1993: Navy climatology support was realigned and given the title Fleet Numerical Meteorology and Oceanography Detachment (FNMOC) Asheville. Co-located with NOAA NCDC and USAF 14WS. Contained a team of approx. 10-11 people.
- 2009: All Navy climatology was relocated to FNMOC in Monterey, CA.
 - Hardware not IA compliant = Started from ground zero.
 - Downsized to a team of 2
- 2010: ACAF Version 1.0 Operational
- 2012: ClimoPortal Version 1.0 Operational
- 2014: ACAF Version 3.0 / ClimoPortal Arctic

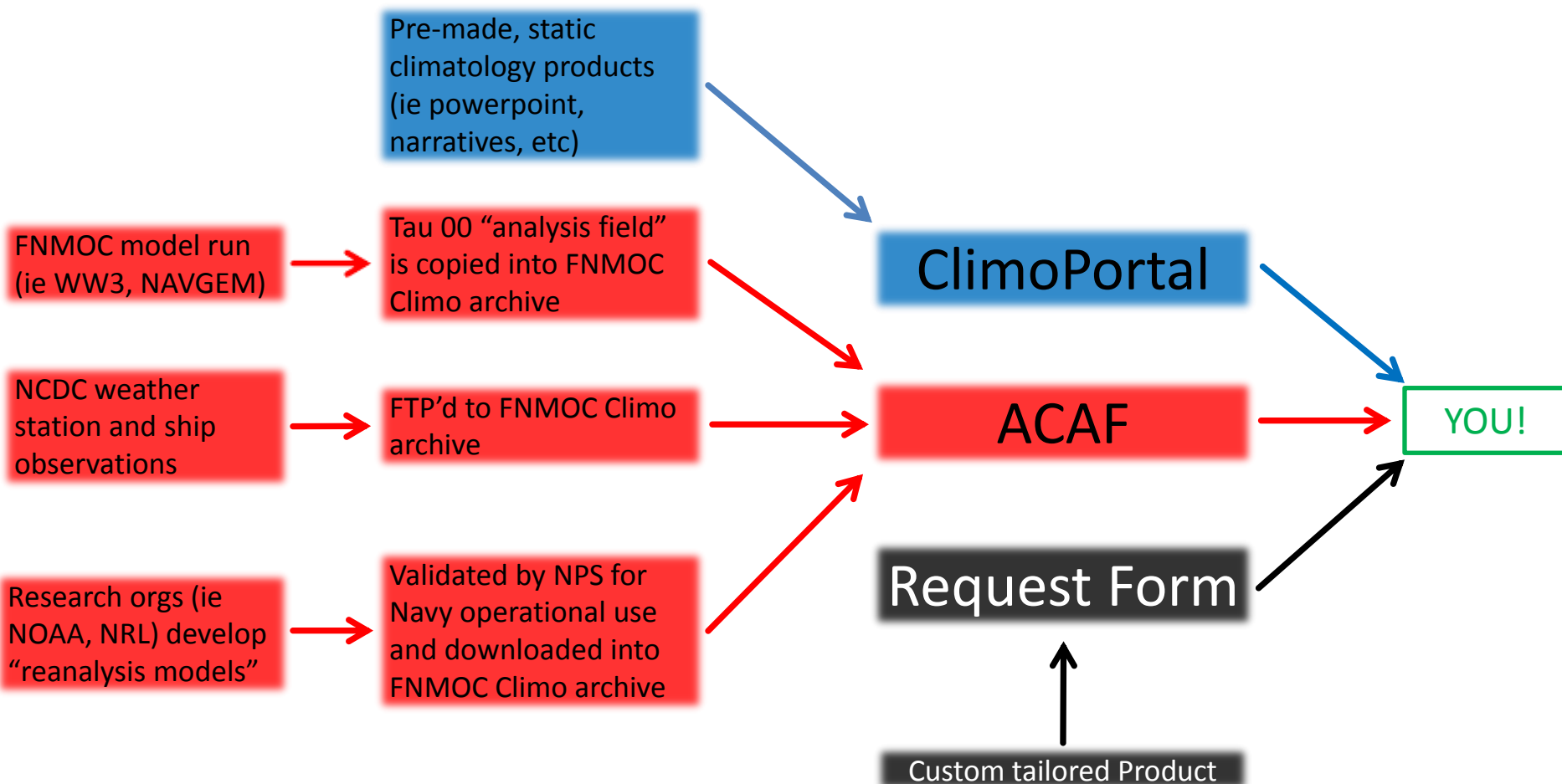


The Navy still has climatologists! Key to success = Automation!



Mission

We make climatological information available to you in many different ways.





ACAF – Gridded Data

Data sets currently available in ACAF include atmospheric and ocean surface reanalyses, land/ship observations and archived FNMOG model analysis fields.

Resulting product can be tailored to fit the user's requirements (plotting options, latitude/longitude spacing)

Figure Types include Long Term Mean, Mean, Probability Threshold, and Anomalies.

Climate analyses can be refined to conditional analyses based on ENSO conditions

Advanced Climate Analysis and Forecasting

Home Observations ACAF Atlas Training Documentation Upper Air Sounding Clinic About

Data Options

Data set: NCEP Reanalysis 6

☐ Display Tropical Cyclone Tracks

Variable: Wind

Level: 1000mb

Units: m/s

Figure Type: Mean

☐ Show only Extremes

Date and Time Options

☐ Single Day ☒ Span of Days ☒ Composite of Months ☒ Conditional Composite Based on El Niño - La Niña Conditions

All months | Reset

☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

Hours: all

Years: All years | Reset

☐ 1979 ☐ 1980 ☐ 1981 ☐ 1982 ☐ 1983 ☐ 1984 ☐ 1985 ☐ 1986 ☐ 1987 ☐ 1988 ☐ 1989 ☐ 1990 ☐ 1991 ☐ 1992 ☐ 1993 ☐ 1994 ☐ 1995 ☐ 1996 ☐ 1997 ☐ 1998 ☐ 1999 ☐ 2000 ☐ 2001 ☐ 2002 ☐ 2003 ☐ 2004 ☐ 2005 ☐ 2006 ☐ 2007 ☐ 2008

Note: If you select no years, all available years (ETM) will be used in the calculation

Plotting Options

☐ Min value ☐ Max value

Map Options

Latitude grid and label spacing (degrees): 30

Longitude grid and label spacing (degrees): 60

Map Projection: Cylindrical Equal Area

Coastline Resolution: Intermediate

Load Color: None

☐ Plot political boundaries?

Area of Interest

Gain Select: 10000 | 20000 | 30000 | 40000 | 50000 | 60000 | 70000 | 80000 | 90000 | 100000

Northern Latitude: 0

Southern Latitude: 0

West Longitude: 0

East Longitude: 0

Display Options

Image Resolution: 75 (Standard screen output)

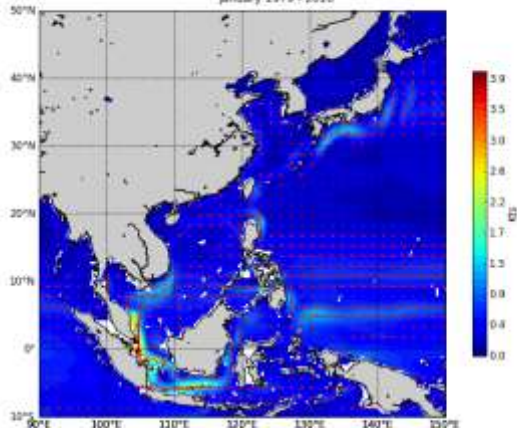
☐ NAR ☐ NetCDF ☐ Labels



ACAF Examples

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CFSR Ocean Data - Western North Pacific
Current at 16.4 ft (5m)
January 1979 - 2010

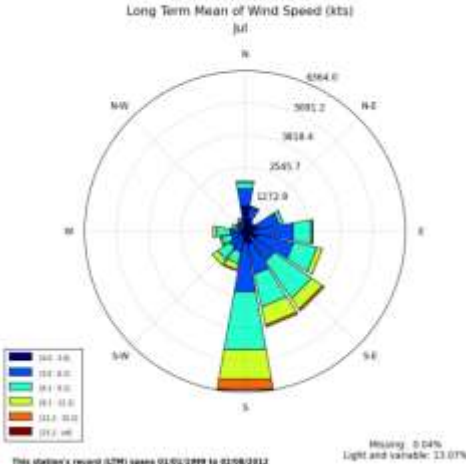


4.0 Kts

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YOKOTA AB
lat: 35.75 Lon: 140.20 Elev: 140 ft
Long Term Mean of Wind Speed (kts)
Jul

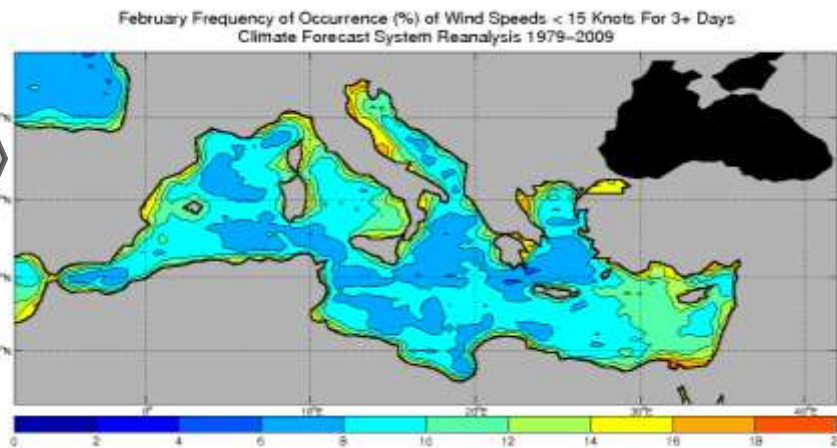




NMME Use Cases / Wish List

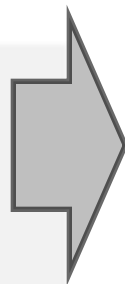
MV Cape Ray – Syria Chemical Weapons

- Frequency of Occurrence Graphics
- Winds <15Kts for 3+ Days



USS Guardian – Grounding Philippines

- Wind/Wave Thresholds Exceeding
- Conditions persist for multiple days



Anti Submarine Warfare

- Surface and Subsurface Conditions
- SST, Salinity, Currents, Air Temp, Humidity and Winds



NAVY CLIMATOLOGY



Questions?